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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,819	11/15/2006	Edward Fuergut	I431.139.101/FTN 474 PCT/7	3080
25281 7590 12/04/2008 DICKE, BILLIG & CZAJA FIFTH STREET TOWERS 100 SOUTH FIFTH STREET, SUITE 2250 MINNEAPOLIS, MN 55402				
EXAMINER				
LOUIE, WAI SING				
ART UNIT		PAPER NUMBER		
2814				
MAIL DATE		DELIVERY MODE		
12/04/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/561,819

**Applicant(s)**

FUERGUT ET AL.

**Examiner**

Wai-Sing Louie

**Art Unit**

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) 20-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-19, 32 and 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 18-19 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (US Pub. 2003/0094675) in view of Ohta et al. (US 6,379,998).

With regard to claims 14 and 32, Yamamoto et al. disclose a semiconductor device (¶ [0060] and fig. 1) comprising:

- A sensor chip 1 with a sensor region 1a, conductor tracks and contact areas 1b on an active top side of the sensor chip 1, the conductor wiring connection 8 to the region 1b (¶ [0061] to [0062] and fig. 1d);
- A plastic (resin) plate 3, in which the sensor chip 1 is embedded by its rear side and its edge sides, the active top side of the sensor chip 1 together with a top side of the plastic plate 3 having an overall top side (¶ [0064] and fig. 1c);
- A rewiring (means for connecting) structure 2 with a rewiring layer having rewiring lines from the contact areas 1b to the external contact areas 2 of the sensor components 1a, the rewiring structure being arranged on the overall top side (fig. 1d);

- Yamamoto et al. do not disclose the active top of the sensor chip and the plastic plate having a planar overall top side. However, Ohta et al. disclose a sensor chip 33a is embedded in substrate 31, which the overall top side of the sensor 33a and the substrate 31 is co-planar (Ohta col. 19, lines 6-17 and fig. 26). Ohta et al. teach the substrate and the embedded chip forming a smooth flattening layer permitting the wiring be made easily (Ohta col. 24, lines 15-19). Therefore, it would have been obvious at the time the invention was made to modify Yamamoto's device with the teaching of Ohta et al. to provide a planar overall top side in order to facilitate wiring made on the sensor chip and the substrate.

With regard to claim 18, Yamamoto et al. disclose the sensor region is radiation-sensitive and comprises a lens (fig. 1c).

With regard to claim 19, Yamamoto et al. disclose the plastic plate 3 comprises a through contacts 2, the through contact being connected to external contact areas on a plastic plate 3 rear side and electrically connected to the rewiring lines 8 on the overall top side (fig. 2).

Claims 15-17 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (US Pub. 2003/0094675) modified by Ohta et al. (US 6,379,998) as applied to claim 14 above, and further in view of Fillion et al. (US 5,353,498).

With regard to claims 15-17 and 33, Yamamoto et al. disclose the overall top side comprises electrode areas (fig. 1d) and rewiring lines extending from the from the electrode areas 1b to contact areas and/or to external contact areas (fig. 1d), but do not disclose the overall top side comprises contact areas of a semiconductor chip (passive components) with integrated

circuit, rewiring lines extending from the contact areas of the semiconductor chip to contact areas of the sensor chip and/or to electrode areas and/or to external contact areas. However, Fillion et al. disclose a semiconductor package in fig. 1c comprises a multiple chip (14 and 20) embedded in polymer (24), and an external contact 30, 32. At the time the invention was made; it would have been obvious to a person having ordinary skill in the art to including additional discrete components teaching of Ohta and Fillion into the sensor package of Yamamoto in order to create a multi-chip modules for desired application; and such package would have allowed a plurality of chips with different thicknesses on a planar surface without milling the chip as taught by Fillion (Fillion col. 2 lines 1-6). Fillion et al. also disclose the semiconductor chips stacked above one another in the plastic plate (Fillion fig. 8d).

### *Response to Arguments*

Applicant's arguments with respect to claims 14-19 and 32-33 have been considered but are moot in view of the new ground(s) of rejection (with a newly cited reference).

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is 571-272-1709. The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wai-Sing Louie/  
Primary Examiner, Art Unit 2814

Wsl  
December 2, 2008.